

We will begin momentarily at 2pm ET



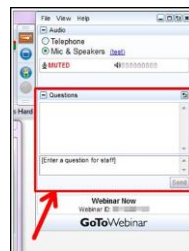
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Have Questions?



Type them into questions box!

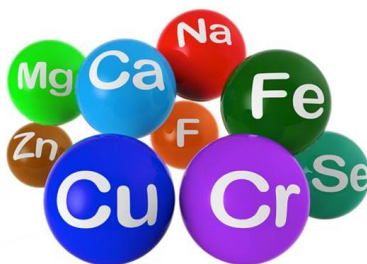
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- Know your career options
- Develop strategies to strengthen your skills
- Map a plan to achieve your career goals

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FEATURED JOBS

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- Build industry partnerships
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<http://ycc.sites.acs.org/catalyzethevote.htm>

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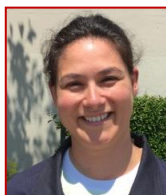
Christopher Boyce, Associate Principal Scientist, Merck

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“Exploring Alternative Careers in Chemistry: Part 2”



Rachel Mohler
Senior Chemist, Petroleum Materials
Characterization, Chevron



Kristen Kulinowski
Board Member,
U.S. Chemical Safety Board



Teresa Fryberger
Senior Director,
Chemical Sciences & Technology Board,
National Academy of the Sciences



Jyllian Kemsley
Senior Editor,
Chemical & Engineering News

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Rachel Mohler, Senior Chemist
Petroleum Materials Characterization, Chevron unit
rmohler@chevron.com

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All about Me

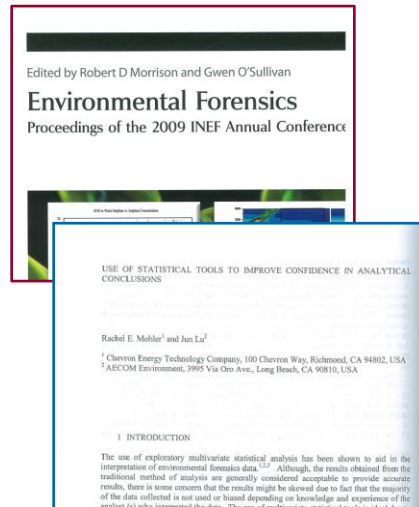
- **Not satisfied with black boxes!**
- **Obtained B.S. Chemistry from UCR**
 - Inorganic or Analytical chemistry?
- **Obtained a Ph.D. Analytical Chemistry from University of Washington**
 - Biochemistry or Petroleum?
 - Chemometrics?
- **Hired by Chevron in 2007 as a Research Scientist**
 - Upstream, Downstream or Environmental?
 - Lab rat, project manager or consultant?





Current Role

- **Environmental**
 - Working with industry groups, regulators and community to help interpret environmental data and advocate for the use of better analytical methods.
 - Data Interpretation
 - Source of material
 - Build models to convert spectral data into concentrations
- **Downstream**
 - Predictive Chemometric Models
 - Crude properties
 - Product blending



Soft Skills Are Required

- **Relationships matter**
 - Be friendly
 - Smile
 - Be a good listener
- **It's all about working as a team**



Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



What soft skills would you like to most improve upon?

(multiple correct answers possible)

- Communication skills
- Time management
- Problem solving
- Adaptability
- Other (type your response in the chat window)

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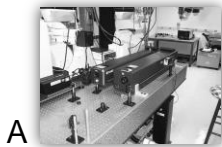
Kristen Kulinowski, Board Member
U.S. Chemical Safety Board
Kristen.Kulinowski@csb.gov, @Kulinowski

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PhD



A Univ of Rochester

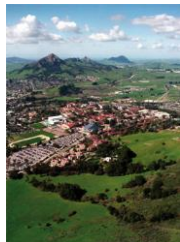
US House of Representatives



D



G



B CalPoly SLO



C/E Rice University



F Science and Technology Policy Institute



What is the CSB?

- The CSB is an independent, non-regulatory U.S. Federal agency
 - ~40 professional staff; \$11 million annual budget
 - Board members are appointed to 5-year terms by the President and confirmed by the Senate.
- CSB conducts root cause investigations of chemical accidents at fixed industrial facilities.
- The agency does not issue fines or citations.
- Primary policy levers are outreach and safety recommendations.



Types of Incidents That We Investigate

Jurisdiction: Release of hazardous substance into the ambient air from a fixed facility (with consequences)

- Incidents in chemical plants, oil refineries and facilities using chemicals
- Toxic gas releases
- Explosions
- Other fatalities, e.g., confined space, hot work
- Major environmental releases



What Investigators Do

- Gather physical evidence
- Interview people
- Test equipment
- Comb through documentary evidence
- Draft reports with proposed recommendations for Board approval





What Board Members Do

- Provide oversight over agency operations
- Vote on reports and recommendations status changes
- Advocate for open recommendations
- Interface with journalists and elected officials
- Act as public face of the agency with stakeholders



Audience Survey Question 

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT

What alternative career paths are of interest to you?

- Government and science policy
- Science journalism and communication
- Chemistry and the law or IP
- Consulting
- Other (type your response in the chat window)



Teresa Fryberger, Senior Director
Board on Chemical Sciences and Technology,
National Academy of Sciences
tfryberger@nas.edu

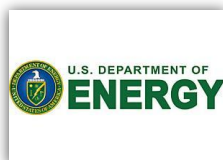
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Education/Background

- Bachelors in Chemistry, University of Oklahoma
- PhD in Physical Chemistry, Northwestern University
- NRC Postdoctoral Fellow at National Institute of Standards and Technology
- Brief experience as associate book review editor at *Science*
- 20 years in government service at DOE, OSTP, NASA





Current Responsibilities

- Leads National Academies activities on chemical science and engineering issues, including
 - Board on Chemical Sciences and Technology (BCST)
 - Chemical Sciences Roundtable (CSR)
- Oversees studies of important national issues in the chemical sciences
- Responsible for raising/managing the funding for the activities and staff



The National Academies of SCIENCES ENGINEERING MEDICINE



Skills/Traits Required

- Scientific background
- Curiosity
- Big picture thinking
- Communication skills—especially writing
- People skills



The National Academies of SCIENCES ENGINEERING MEDICINE



Resources

Happy to be contacted! tfryberger@nas.edu

For information on BCST: <http://dels.nas.edu/bcst>

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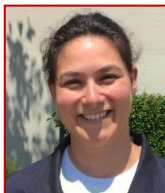
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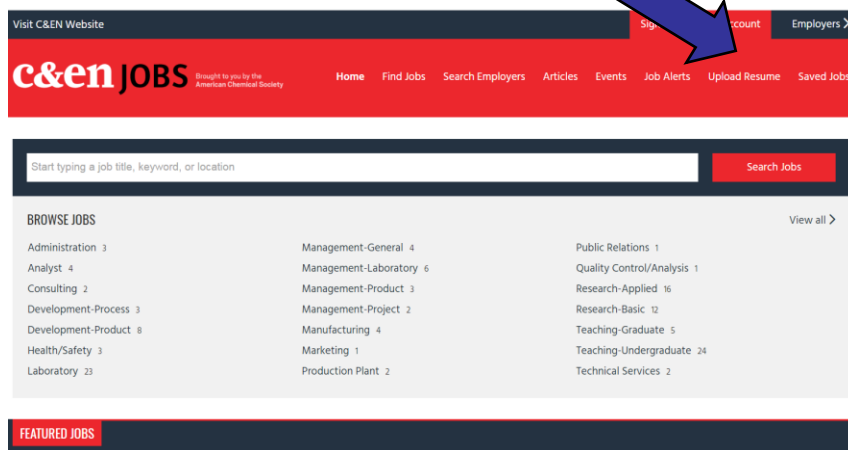
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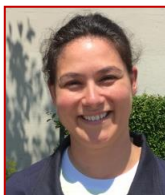


Jyllian Kemsley, Senior Editor,
Chemical & Engineering News
j_kemsley@acs.org, [@jkemsley](https://twitter.com/jkemsley)

<https://cen.acs.org>

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